Project Introduction

Radiation shielding is an enabling technology required for extended manned missions to the Moon, Mars and the planets beyond. Multifunctional structural must protect crew in a spacecraft, crew exploration vehicle, landers, rover, or habitat from Galactic Cosmic Rays (GCR), Solar Energy Particles (SEP) and micrometeroid impact and at the same time keep both the weight of the structure and the cost of fabricating the structure to a minimum. Materials Modification, Inc. (MMI) proposes to develop and evaluate a series of versatile, novel, multifunctional hybrid structural composites comprised of a high hydrogen epoxy matrix

Primary U.S. Work Locations and Key Partners

Organizations Performing Work	Role	Type	Location
⭐Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Materials Modification, Inc.	Supporting Organization	Industry Small Disadvantaged Business (SDB)	Fairfax, Virginia

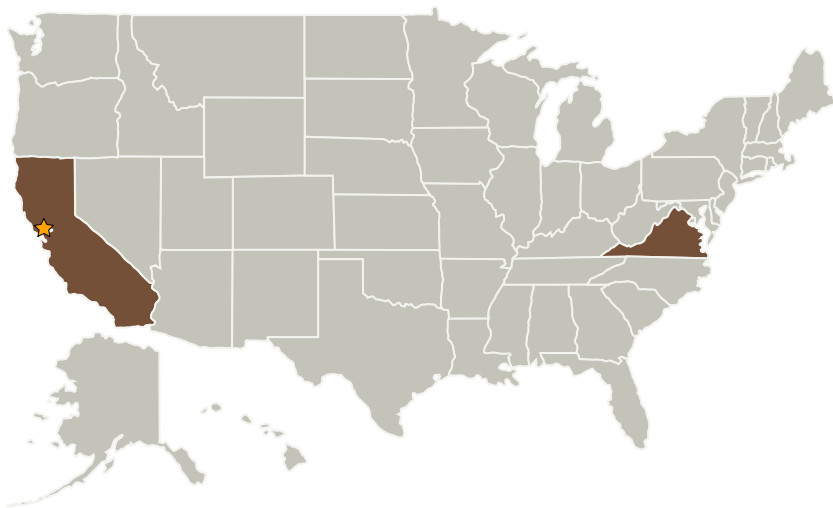Multifunctional B/C Fiber Composites for Radiation Shielding, Phase I

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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https://techport.nasa.gov/view/7971

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Primary U.S. Work Locations	
California	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
  └ TX12.2 Structures
    └ TX12.2.5 Innovative, Multifunctional Concepts